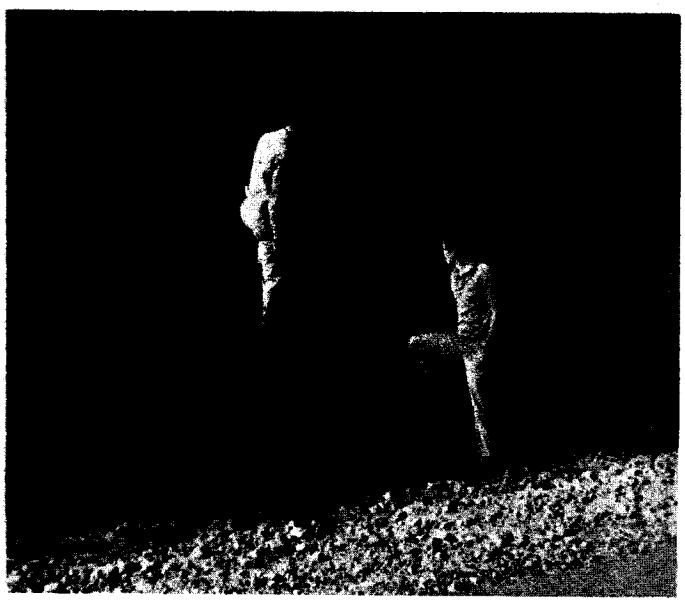
Vegetative Measures

There are two kinds of erosion and sediment control measures—structural and vegetative. For best results, these measures should complement each other. Establishing vegetation on recently disturbed or bare areas depends on several basic considerations. First, excess water which falls on the area and flowing from land above must be disposed of properly. This includes properly located and designed diversions, grassed waterways, subsurface drains, and stabilized outlets of different types.

Once the water has been disposed of, a second consideration is seeding and/or planting. This includes selection of plant species having characteristics enabling them to grow and hold the soil on a particular area. They fulfill a variety of other uses in addition to stabilization. Included in seeding and planting is consideration of the chemical nature (ability to supply plant nutrients) of the soil. Chemical tests will guide intelligent application of lime and fertilizer.

Third, when the water is controlled on a site and the area has been prepared and seeded, it must be protected from heavy use until plants can provide the needed soil protection for the planned uses. In some cases future use may always be so intensive that the only stabilization is a paved surface. For less intensive uses, protection may be provided in different ways such as fencing, or netting until vegetation is established. The primary objective of vegetative growth is stabilization of the area so that erosion is controlled and sediment losses are reduced to a minimum. Both permanent and temporary vegetative measures should be considered.

The types of protective vegetative cover should be included as part of the project plan. Planning for the erosion hazard, seeding needs, and implementation during construction will help eliminate serious problems later.



This highway bank was effectively stabilized with vegetation.

One very important guide is that seeding or planting of an area should be started as soon as possible after the area has been disturbed. A time limit in construction contracts for the length of time a site can remain unprotected is desirable.

Vegetative measures range from a simple seeding practice for temporary erosion control to a very complex sodding or seeding and planting (woody species) job. Temporary protection may include seeded species (annual or perennial grasses), or use of mulches (straw, wood chips, or barks), without seeding, or plastic, jute, erosion net or other synthetic material. Permanent protection may include such items as rock or gravel.

Grasses and legumes are used on graded and cleared areas where quick, dense cover is needed to reduce runoff and erosion. Mixtures may be used for temporary stabilization or for permanent protection where mowing and fertilization are feasible.

On areas having gentle slopes and adequate fertility, satisfactory protective cover can be established very easily. On steep areas where the subsoil has been exposed, the problems of establishment are more difficult. These areas require a combination of treatments. On soils where runoff water has been controlled, 1-1/2 to 1 slopes may be protected satisfactorily.

For best results, four elements are essential: proper planning, frequent follow-up during project installation, prompt establishment of vegetative measures, and proper maintenance.